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THE ROLE OF WATER IN THE ETIOLOGY OF ANIMAL BOTULISM

METHOD OF DETECTION OF BOTULISMUS TOXIN C IN WATER

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THE ROLE OF WATER IN THE ETIOLOGY OF ANIMAL BOTULISM METHOD OF DETECTION OF BOTULISMUS TOXIN C IN WATER

by L. Pigoury, C. Michel, and C. Chabassol

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Summary

Botulism contracted through water is of considerable interest in veterinary medicine. The animals become contaminated by the ingestion of spores or of the toxin which is usually found in water or enters it occasionally.

By experimenting with the toxin C, we have developed a method of detecting the botulismus toxin in water which is based on concentration of lyophilization.

We lyophilize 50 ml of water filtered with a "Chardin" filter and add 50% dextran or 5% heated horse serum. To this are added 2 ml of distilled water containing 100 units of penicillin and 5 mg of streptomycin. This is injected into the peritoneum of a mouse. The method is suitable for use with multiples of 50 ml, depending on the number of mice it is desired to inoculate (toxotypy).

Taking into account a lowering of titration by 50% after lyophilization, the minimum quantity of detectable toxin C is about 1/25 DMm of mouse per ml of water or a dose about 10 times less than when inoculating the same volume of non-concentrated water.

It would seem possible to extend the method to the concentration of other types of toxins and to the detection of small quantities of such toxins in organ specimens or in samples of food.

(Research Institute of the Biological and Veterinary Services of the Armed Forces, Alfort.)

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